THE GENESEE FARMER.

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By Luther Tucker & Co.
EDITORS AND PUBLISHERS.

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☞ New subscribers can be supplied with the first, second and third volumes.

THE GENESEE FARMER.

SATURDAY, FEBRUARY 15, 1834.

Improving the Breeds of Animals

Our readers will find, under *Science of Agriculture*, an excellent supplemental article to those we have published on *Cattle Husbandry*. If we mistake not, it will satisfy many of the errors which prevail upon this subject among us, and lead to a better practice. It must be read with interest by every farmer, but particularly by the breeder and grazier. We should oftener publish articles of this description, but for the unaccountable prejudice which exists against the term *science*. Both Bakewell and Collins were scientific breeders; and it is probably to this branch of their knowledge that we are indebted for the highly improved breeds which they produced.

Expedients to procure Fuel.

We learn from the *Journal of a Naturalist* that formerly it was a general practice in the midland counties of England, to pick and collect into heaps all the droppings of their autumn and winter fed cattle. These were "beaten into a mass with water; then pressed by the feet into moulds like bricks, by regular professional persons, called *clatters* (clodders): then dried in the sun, and stacked like peat; and a dry March for the clat-harvest was considered as very desirable. These answered very well for heating water for the dairy, and uses of the farm back kitchen, giving a steady dull heat without flame; but navigable canals, and other conveniences of a similar nature, have rendered the practice now unnecessary."

This might exemplify the old saying that "one half of the world don't know how t'other half lives." In this comparatively new country where wood is so abundant, we seldom think of the sufferings of the poor from cold in places less favored, especially in severe winters; or that a scarcity of fuel is among their greatest calamities. For our own beloved land however, we have brighter prospects; and before our woods shall become exhausted by the demands of a dense population, canals and rail roads will doubtless be ready to introduce coal in abundance to supply all our wants.

In some parts of Asia a want of fuel is severely felt. In Arabia the dung of asses and camels, is chiefly used for this purpose. According to *Niebuhr* little girls go about gathering it in the streets and in the highways; mix it with cut straw, and dry it in the sun. On the borders of Persia and Georgia, we learn from *Tournefort* that oxen are bred *for their dung* as well as for their flesh. At Erzeroum in Armenia, he complains of the sharpness of the winters and the scarcity of wood: "Nothing but pine wood is known there, and that they fetch two or three days journey from the town. All the rest of the country is quite naked—you see neither tree nor bush, and the common fuel is cow's dung. It is almost inconceivable what a horrid perfume it makes in the houses, which can be compared to nothing but fox-holes."

Another traveler (*Le Bruyn*) says, "Wood is very dear in that country, and is *sold by weight*: they give you but twelve pounds of it for four pence or five pence." Four and a half pence *sterling* is equal to eight cents and a third.—so that one cent would buy about one pound and a half of wood. If green, it might lose one third of its weight and then be worth one cent a pound—perhaps a little short of thirty dollars a cord.

On the Use of Sun Dials.

There is another advantage resulting from the use of Sun Dials: We need nothing to tell us when the sun rises or sets,—the instrument completely superseding Meridian, Horizon, and Almanac. This is the more desirable as we often purchase Almanacs, either misprinted or calculated for other latitudes. Only a Table of the Equation of Time is wanted, which we subjoin, and which will serve without sensible error* for common purposes perhaps as long as the Dial stands.

Days and months.	Minutes.		Days and months.	Minutes.		Days and months.	Minutes.	
Jan. 1	4	Set the clock faster than the Dial.	Apr. 24	2	Clock slower.	Sep. 27	9	Clock slower than the Dial.
3	5		30	3		30	10	
5	6		May 13	4		Oct. 3	11	
7	7		29	3		6	12	
9	8		June 5	2		10	13	
12	9		10	1		14	14	
15	10		15	0		19	15	
18	11		*			27	16	
21	12		20	1		Nov. 15	15	
25	13		25	2		20	14	
31	14		29	3		24	13	
Feb. 10	15		July 5	4	Clock faster.	27	12	
21	14		11	5		30	11	
27	13		28	6		Dec. 2	10	
Mar. 4	12		Aug. 9	5		5	9	
8	11		15	4		7	8	
12	10		20	3		9	7	
15	9		24	1		11	6	
19	8		28	0		13	5	
22	7		31			16	4	
25	6		*			18	3	
28	5		Sept. 3	1	Clock slower.	20	2	
April 1	4		6	2		22	1	
4	3		9	3		24	0	
7	2		12	4		*		
11	1		15	5		26	1	Cl. fast.
15	0		18	6		28	2	
*			21	7		30	3	
19	1		24	8				

A time piece that truly measures twenty-four hours, will not long agree with the sun, owing to the irregularity of the *apparent* motions of that luminary. It will sometimes be on the Meridian too soon, and at other times too late for that agreement; and therefore if we should attempt to regulate the clock or watch by the sun without the equated time, we should have frequently to alter the hands. All this trouble and uncertainty may be prevented by the foregoing table. It is true, all the days in the year are not marked in it; but every day on which the difference amounts to one minute, is marked; and the time piece is to be corrected by this until the day on which the difference amounts to another minute. An example may be useful: On New Year's Day set the clock four minutes *faster* than the Dial. We may further remark that there are four different times in the year when the clock and dial will agree; and that the greatest disagreement is in autumn, then amounting to sixteen minutes, being one minute greater than it is at the present date.

* We are aware that "the equation of time must be computed anew for every year," where great accuracy is required; but *Keith*, from whose Treatise on the Globes the foregoing table is copied, recommends it to "be put on every horizontal Dial." It was printed in 1826; and on comparing it with the table in Bowen's American Almanac for the present year, calculated to the hundredth part of a second, we find the *difference* in no case to amount to more than the *fraction* of a minute.

British Farming Capital.

The expense of stocking a farm of 150 acres, and the necessary outlay for one year, is estimated in one of the latest British publications, at 1450*l.* 9*s.* 6*d.* ($6440) of which half a year's rent forms an item of 112*l.* 10*s.* and the poor rates another item of 20*l.* or $88,80. In the Quarterly Journal of Agriculture, the expense of estimating and carrying on a farm of 500 acres, for one year, is estimated at 3569*l.* 17*s.* 11*d.* ($15,849) the rent of which is put down at 1000*l.* Of the 500 acres, 100 are supposed to be in fallow, turneps and potatoes, 100 under wheat and barley, 100 oats, 100 grass seeds, and 100 year old grass. With these heavy charges, to which the expense of American farming bears but a small proportion, British farmers live and grow wealthy. The rent, tithes and poor rates are an enormous draw back in England, of which we have but very little experimental knowledge. The rent in the first case noted is about $7, and the poor rates 75 cents per acre. In the latter case the rent is about $9 per acre. The only manure charged in the latter estimate (the rest being made upon the farm) is 640 bushels of *bone dust*, at 2*s.* 6*d.* per bushel, or 80*l.* ($355). The expense of cultivating an acre of the several crops is estimated as follows: turneps, 5*l.* 10*s.* 2*d.*; barley, 4*l.* 14*s.* 7*d.*; clover, 2*l.* 11*s.* 10*d.*; wheat, 5*l.* 13*s.*; beans, 5*l.* 2*s.* 9*d.*; oats, 4*l.* 7*s.* 7*d.* These amounts include rents, tithes, rates and taxes upon the land occupied by the several crops. In dollars they amount to a charge of ten to twenty-four per acre. It will be perceived, that the 500 acre farm is under alternate husbandry—there being no grass of more than one year old.

The improvement of British farm stock, has been strikingly evidenced in the records of Smithfield market. In 1730, the average weight of the fat cattle sold there, was estimated, by Davenant and others, at only 370 lbs. exclusive of offal, or hide and tallow; of calves at 50 lbs., and of sheep and lambs, taken promiscuously, at 28 lbs. It is estimated that the present average weight of cattle (1833) is 656 lbs. excluding offal, of calves 144 lbs., and of sheep and lambs 90 lbs. Thus

the average weight has been nearly doubled in the last hundred years. These data will enable us to judge of the susceptibility of improving our own stock. This branch of the London provision market is thus stated for 1830, not including the dead meat brought in.

	Av'ge w't.	No. of pounds.
Cattle....	159,907.....	656.... 104,898,992
Sheep...	1,287,070.....	90.... 115,836,300
Pigs.....	254,672.....	96..... 24,448,512
Calves....	22,500.....	144..... 3,240,000

The gross amount of butcher's meat, averaged among the population of the city, gives to each individual 170 lbs. per year, or more than half a pound per diem, exclusive of bacon, hams, fish and poultry. The consumption in Paris, of like meat, is estimated at 80 lbs., and in Brussels at 89 lbs. per annum, by each individual.

Straw Cutting Machines.

A correspondent asks us to inform him where a machine for cutting straw may be obtained, which is made to be worked by horse power. As we are unable to inform him, we will thank some of our readers to afford us the desired information. He further says:

"I have kept a stock of cattle and sheep on uncut straw for two winters, and they have been in fine condition in the spring; but from a small experiment in cutting, I am satisfied it will pay for cutting for young cattle as well as horses and cows, if it can be done by horse power. Lambs and yearling sheep will not winter on it when uncut; and no stock will do as well to be half fed on hay as they will to be entirely confined to straw."

Rice Porridge.

The following method of cooking rice, more especially for the sick who may be confined to a vegetable diet, has been found very useful, and less liable to cloy the appetite than some other preparations. We believe it has not yet found its way into any Book on Cookery.

Take a wine glassful of rice, well picked and washed, and put it into a sauce pan with a pint of cold water. Boil it one hour or more. Pour it into a bowl, and add a table spoonful of cream (with a little lump of butter for those who desire it) and season it with salt.

Notices, &c.

Correspondence.—We tender our thanks to the Rev. H. Colman for his communication which we publish to-day, and beg leave to assure him that he is most cordially welcomed to our pages. There are many gentlemen among the subscribers to our paper in New England and in Pennsylvania, who are eminent for the services they have rendered the cause of Agriculture, from whom it would give us great pleasure occasionally to receive contributions for the Farmer.

The Fish Story.—The "Singular Fact," mentioned by R. M. W. page 38, has been the subject of much conversation, and has been very generally and promptly denied. We make the following quotation from a letter on the subject:—"I would inform you or your correspondent, R. M. W., that he is grandly mistaken in his statement respecting the weight of a living fish in a tub of water. I say that the tub of water will weigh just as many pounds more as the weight of the fish put in. If it does not prove so I will pay his subscription (for five years) to the Genesee Farmer."

Large Apples.—Mr. Lang of the New York Gazette, recently sent an Apple to the editor of the London Times, the receipt of which has been acknowledged in that paper, which weighed one pound and two and a half ounces. Next time Mr L. wishes to send a large Apple to England, we advise him to procure one from the Genesee Country or from Ohio. We were presented in September last, with an Apple grown in this village, which weighed *twenty-two* ounces; and we see it stated in the papers that one weighing *twenty-four* ounces, and measuring 15 inches in circumference, was gathered the past fall from the orchard of Heman Ely of Elyria, Ohio.

Great Yield of Apples.—It is stated in the Westfield (Mass.) Journal, that Noah Clarke, jr. of that town gathered on the 26th of October from one tree on his farm, one hundred and nineteen bushels of sound apples—the produce of one tree, there being no other within fifty rods of it. It was ascertained that they would produce more than fifteen barrels of cider.

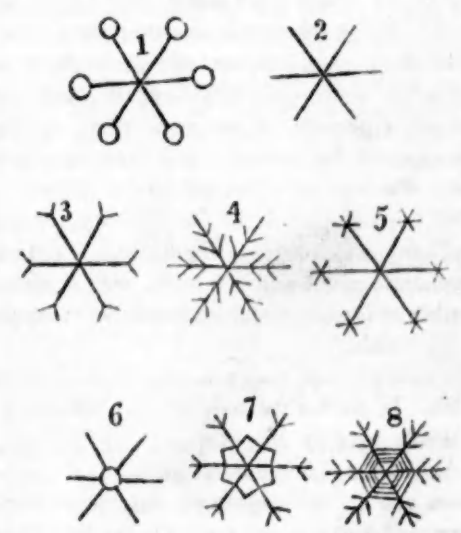
Hops.—The annual report of the inspector of hops in the city of New York was received and laid on the table of the Assembly on the 24th Number of pounds inspected, 552,190. Estimated value, $121,481 80.

☞ It is mentioned in the New York Shipping List, as information obtained through a gentleman from Germany, that American Hops have been tried in that country, and obtained a decided preference to the English; and that an increased demand from that quarter may be looked for hereafter

For the Genesee Farmer.

Snow Formation.

One of the most surprising instances of the beautiful order and regularity with which all the undisturbed operations of nature are performed may be witnessed at times in the chrystalization of snow. When a body of aqueous vapor, or clouds, meets with a cold current of air, the minute particles of water which compose it, are frozen, and fall to the earth in the form of snow, as the dew becomes hoar frost; but if the aqueous vapor is already condensed into drops before meeting with the freezing current of air it becomes hail, which is the same as ice on the surface of the earth. In ordinary cases, owing to the agitation of conflicting currents of air, the chrystalization is irregular and imperfect, giving the falling snow the appearance of flocculi or masses of needles, generally called snow flakes, which on examination are found to be composed of a multitude of minute bars of ice crossing each other in every possible direction. For the perfect chrystalization of any substance it is necessary it should be as nearly at rest as possible, and therefore a still calm state of the atmosphere is the most favorable for the perfect formation of snow chrystals. Almost every one has observed that during the calm which sometimes succeeds a violent snow storm, and before the air becomes entirely clear, scattering chrystals will be seen gently descending to the earth, and it is these that offer the most beautiful specimens of snow chrystalization. In all cases most that fall will be broken or imperfect, yet many will descend whole, and when viewed through a glass are splendid in the extreme. The best way I have found fo observing them, is to let them fall on a smoot black cloth previously cooled by exposure, so as not to melt the chrystals, when in the open air, or in a room of low temperature, they can be examined at leisure. It must however be remembered, that the finer the specimens the more easily they are destroyed, and that a single breath is frequently sufficient to return them to their original state, a scarcely visible drop of water. The cause of this regularity in the formation of these chrystals, will probably remain one of the mysteries of nature. Grew assigns as a cause the collection of nitrous impregnations in the vapor. Dr. Black maintains that they are pure icy concretions, and that polarity is the cause of their form. Beccaria attributes their form to electrical agency; and De Ratte to various exhalations combined with the congealing water. I cannot imagine that there is any need of calling in the aid of extraneous agency to account for the hexagonal chrystalization of water, any more than for that of several minerals, not to mention most of the salts, and sugar, the various forms assumed by these being well known. The manner in which the chrystals of snow are formed, appears to be better understood than the cause. A single particle of aqueous vapor is first frozen, and in a calm state of the air, when the process is uninterrupted, becomes the nucleus around which the neighboring particles speedily arrange themselves, according to those laws of attraction which govern, during the change of water from a fluid to a solid state. On Tuesday the 17th inst. through the day the wind blew with great violence from the east, and in the afternoon and evening there was a slight fall of snow. In the morning of the 18th, the air was from the north, very still, and an excellent opportunity offered for observing the specimens of chrystals which fall at such times. I succeeded in securing and examining whole chrystals of the kinds figured below, besides fragments of various other forms of chrystalization, a variety better understood when it is mentioned that Capt. Scoresley, the intrepid navigator of the Spitzbergen seas, has in his "Arctic Regions," figured ninety-six different kinds which had fallen under his notice. The specimens I have figured were generally about $\frac{3}{16}$ ths of an inch, the representations are therefore magnified to two or three times the real size.



Of these, Nos. 2 and 4 were found in the greatest profusion; Nos. 5 and 7 were scarce.

Otisco, Dec. 1833. W. G.

For the Genesee Farmer.

A simple Remedy for a Cough.

It often happens that persons who have coughs arising from catarrhs, are under the necessity of exposing themselves to the cold air which very generally aggravates the symptoms. I have known several instances however, in which the following simple remedy has been attended with the most beneficial results; and an inmate of my family has been so much relieved by it within the last twenty-four hours, that she earnestly wishes it to be published for the benefit of others.

Tie a handkerchief loosely over the mouth and nostrils to exclude the cold air.

Last evening she had a bad cough attended with considerable soreness. On going to bed, she used a handkerchief in the manner recommended, and slept well through the night. On removing it this morning the cough returned, and continued till after breakfast when she commenced a large washing, and the bandage was resumed. She was not disturbed while she kept it over her face which was through most of the day; and though on removing it the cough returned, yet it was much better than it had been, and the disease this evening is abating. VERITAS.

For the Genesee Farmer.

Chain Pump.

MESSRS. L. TUCKER & Co.—In a number of your valuable paper (vol. 3, p. 250) I observed a few lines respecting Pumps and Buckets for wells. I will take the trouble to inform my brother farmers how I draw water from my well. I would observe that it is four years this fall since I dug a well, calculating the next spring to build me a house of brick near said well, which would need a large quantity of water in building. I therefore prepared myself with a bucket, calculating to fix it as my brother Farmer describes his; but in looking for a pattern to work by, I could find none that worked to suit me. I then applied to pump makers, but they could show me no plan that I liked. I then recollected a well of Capt. David Coy's, in Homer village, that drew water with what I call a chain pump. I went and examined for myself. I found it in good order, though it has been in operation about 20 years. I asked him how he liked it. He said it was the best way he ever saw to draw water. I went home and fixed mine immediately, and I am satisfied it is the best plan to draw water that I have ever seen.

I will now describe the plan of my chain pump: My well is 22 feet deep. The well curb is 2 feet 10 inches high—then make a wheel 1 foot in diameter, of 2 inch pine plank, with axle-tree and crank, which will turn the same as a grindstone, and will rest on the top of the curb—then take 2 pine planks 1½ inch thick, 5 inches wide, joint them straight—then take a half round tool and make half a hollow in each of them 1½ inch deep—then nail the plank together so as to make a round hole between them 1½ inch in diameter, 2½ up from the bottom—then make the hole a size larger from there to the top of the box, which I call the pump—then make a spout or shoe of board 2 feet long, 6 inches wide, and 4 inches deep—then cut a hole in the side of your well curb large enough to let in your spout, 17 inches from the bottom of your curb. Set the pump in the well—let it run down so low that the water will never dry and settle below your pump—it should at least stand one foot in the water—nail a board on the back side of your pump at the bottom for it to rest on, so that it may not settle too low in the well—let your pump stand near the side of the well, and the top of it be fastened to the under side of your spout—make a hole in the bottom of your spout to receive the water from the pump. Then calculate how many feet of chain it will take to go over your wheel, when hung on the curb, and go to the bottom of the pump, and say about 6 or 7 inches below—then come up through the pump to the wheel again. This chain may be made of horse trace or large halter chain, and must be cut apart once in 2½ feet, and connected again with what I call an 8—on each of these 8s you must put 2 pieces of thick sole-leather, the forward one just big enough to fill the hole in the pump, and the other, or backside one, a size smaller. This is to stiffen the other and keep it in its place. Put one pair of these leathers on each 8 before they are connected in the chain—put your chain through the pump before you connect the last link. I have six crotched irons drove in the out edge of my wheel to keep the chain in its place on the wheel; and to save the chain from wearing the bottom of my box or pump, I nailed on a bit of oak plank, 2 inches thick, and rounded it off smooth for the chain to run against. Whenever a leather wears out or fails, (which mine has not done yet,) I was told to make a new one, then cut it open on one side, slip it on to the 8, and fasten it together with a small wire.

I have had mine in operation about 2½ years, and it wants no repairing yet. The advantage of these chain pumps are numerous—1. They draw water very easy unless the well be over 20 feet deep, and then they will draw harder. 2. They are very cheap. 3. They are easy repaired and kept in order. 4. They are in no danger of ever freezing unless your well freezes over. 5. You can draw as near the top or bottom of your water as you please; but too near the top is warmer, and too near the bottom is apt to be muddy.

Now, sir, if you can make any thing out of my bungling way of describing my chain pump, you are at liberty to insert it in your valuable paper for the benefit not only of my brother farmers, but for all classes of people who have to use wells. SAMUEL GRIGGS.

Grigg's Port, Jan. 1, 1834.

Wintering Sheep and Care of Lambs.

Give your ewes with lamb somewhat more than their usual quantity of food for a month or six weeks before they are expected to yean. They should not be fed so as to fatten them, for if they are in high condition they will be more apt to suffer in becoming mothers, and will be less fit for nurses. It is a good practice to give about half a gill of Indian corn a day to each sheep with lamb, for some time before and after they have yeaned, and roots may be advantageously added after that period. The *Farmers's Manual* says, "If you have stored more turneps than are sufficient for the use of your table, give them to any stock that will eat them except your sheep; give to them potatoes, but not turneps at this season, they will injure the lambs."

If your sheep, whether store sheep or ewes with lamb, have good hay, about a quart of potatoes a day to each will, it is said, be very beneficial, and an ample allowance. But when the object is to fatten them, according to a writer in Rees' Cyclopedia, about a gallon of potatoes a day with a little hay will be the proper quantity; but this depends in part on the size of the animal, and in part on the quality and quantity of the hay which is given them. Potatoes, besides their use as *food* for sheep, are said to be very serviceable as an article of diet, which usually supersedes the necessity of *medicine*. They have, when given raw, an opening quality, which is said to answer a similar purpose with sheep, which is effected with swine by brimstone and antimony. Potatoes baked, steamed or boiled, will furnish more nutriment than those which are raw.

Care should be taken to place in the stable small tubs or troughs of water for the sheep to drink in. They will do very well in summer without water, as they feed when the dew is on, but they need water in winter, especially if fed mostly with dry food. "When sheep have colds, and discharge mucus from the nose, good feeding, together with pine boughs given occasionally, will probably cure them; or tar spread over a board, over which a little salt is strewed, which will induce sheep to lick up the tar, and this will cure a cold."*

"When several kinds of food can be procured, it is right to give them alternately to the sheep at different meals, in the course of the same day; the qualities of one kind aid or compensate those of another. At certain hours of the day dry fodder should be given, and at others roots or grain. If there be any danger that the roots may decay, the winter should be begun with them, mixing, however, some dry food with them, for alone they would not be sufficiently nutricious."†

Sheep should have a yard by themselves, its size adapted to the number of the flock. They require shelter overhead, but its sides should not be so close as to confine the air. The rack from which sheep are fed with hay should be upright, so that the seeds, &c. may not fall into the wool about their necks. Under the rack a trough should be fixed, which will serve at once for catching the seeds of the hay, and for feeding the sheep with roots, &c.

If the flock be large, or over about fifty, a separation of it during the winter is desirable for promoting the health as well as the comfort of the animals. The full grown wethers should be put by themselves, and will not require so good keeping as the ewes and last year's lambs. A suitable apartment should likewise be provided for such sheep as by reason of age, sickness or infirmity, require extra attention. Sheep require but little if any salt in winter, and there are reasons for believing that a too free use of salt has been the cause of sickness and death in sheep.‡

M. Tessier observes, that "Sheep have been known to be attacked with long and troublesome looseness in consequence of having taken too much salt, which has induced a belief that sea water is poisonous to them; and that his sheep have always been healthy, though he had never given them salt, but he states that it may be indispensably necessary in wet countries."—*New-England Farmer.*

Black Tongue.

Gen. Barnum, of Vergennes, has given, through the Middlebury Argus, his views in relation to this prevailing disease among horses and cattle. He is fully satisfied that the disease is contagious by *contact*, and by contact *only*. His experience goes to show that a simple wash of salt and saltpeter, applied two or three times a day, is an effectual remedy. He says—"I found this course of practice immediately diminished the inflammation, and increased the appetite, and finally restored them to health, without any other apparent injury, than a loss of service and a waste of flesh. Frequently, horses severely attacked with this disorder, will, for many days, refuse dry food and even water. In such cases, I would recommend rye or corn meal—wheat flour mixed with water, (milk, if convenient, is better,) to which may be advantageously added, an ounce of sulphur to two quarts of the food for two or three days."

As a preventive, he strongly urges the importance of thoroughly cleansing and white-washing stables, racks, troughs, &c. and keeping the troughs liberally supplied with salt and a small quantity of saltpeter, with tar at the bottom. This course on a former occasion effectually protected his own stock, while the disorder was raging all around him, and has so far protected him the present season.—*Keeseville Herald.*

☞ In the Senate on Thursday last, Mr. Hubbard reported a bill to authorise the survey of a canal route from *Rochester to Olean.*

* Deane's N. E. Farmer.
† Tessier's Treatise on Sheep.
‡ See N. E. Farmer, vol. xi. p. 246.

For the Genesee Farmer.

Indian Corn.

Mr. Editor—I have been an attentive reader of the Genesee Farmer from its commencement, and beg leave to express my respect for the ability, intelligence, and practical utility, with which it has been conducted. I am likewise an ardent admirer of the agriculture of New-York, having visited with peculiar satisfaction, several parts of your noble state, unrivalled for its enterprize and public spirit; having the honor of a partial acquaintance with some of your most eminent cultivators, who are second to none for their inquisitiveness, knowledge, skill, and success in this most important of all arts, and regarding the publications of your societies, and some individuals in your state, as among the most valuable, which have come under my notice.

With these impressions, few things in your paper escape my observation; and my attention was attracted this morning to a communication on Indian Corn, signed Quercus, in the Farmer of the 25th inst. I agree with your intelligent correspondent on the importance of particular attention to the seed we plant, its selection, preservation, and the preparation of it; and to its character for productiveness, adaptation to the soil, and early maturity; but of the relative value of the twelve and eight rowed corn, my experience and observation do not confirm his views.

I have been in the practice for years of planting extensively of the twelve rowed corn, though I have usually planted some of the eight rowed likewise. The twelve rowed corn which I plant, corresponds with his description of the Dutch corn, planted on the Mohawk. I have received seed from various sources; from Roxbury, under the name of the Golden Sioux; from Brighton, as the Pomroy corn, because S. W. Pomroy, Esq. circulated the seed through the state after the disastrous season of 1816, as a very early corn, almost sure to be ripened, and as husking itself in the field; that is, when ripe the husks fall down and leave the ear exposed, presenting a golden harvest to the delighted eye of the farmer; from Judge Buel, as the Dutton corn from Vermont; from E. Phinney, Esq. of Lexington, Mass., as a corn received by him from Vermont; but though obtained from these different sources, it appears to be of the same kind. Of the eight rowed corn there are many varieties planted in this part of the country; some very large, called here the Dickinson corn, from one ear of which plucked in the field, ripe but not dry, I shelled more than a pint of good corn; a second kind, smaller and earlier ripe, called the Clesson corn; these are merely local names; and a third, still smaller, called the Canadian, which having been planted here several years has much increased in size from what it was when first introduced. The largest kind of eight rowed corn is a magnificent plant, but of late maturity; requires very wide planting, and is often allowed from six to eight, and even nine feet by five between the hills. I presume your correspondent does not refer to this kind, and I shall take it for granted from his remarks, that he refers to a middling sized eight rowed corn, which produces an ear from eight to nine inches in length, and a larger kernel than the twelve rowed.

I will then recapitulate in order the grounds on which he gives the preference to the eight rowed corn over the twelve rowed, and subjoin the results of my own observations and experiments.

1. First he says, "Two bushels of twelve rowed ears when shelled, will yield only one bushel of corn, and frequently fall a little short. Two bushels of the same length* ears of eight rowed will yield generally a bushel and three or four quarts of shelled corn."

These positive statements put me upon an inquiry into the actual facts, as far as I had the means of determining them. I have no theory to establish, but am desirous as your correspondent of ascertaining what is true, and consequently determining what is best. I therefore applied to a near neighbor, G. S., a small farmer, but extremely careful in all his operations, and obtained some eight rowed corn, of which he raised as fine a sample as I ever saw, and of a good size, in order to compare it with my own. His corn being planted very early, was in perfect condition; mine planted from three weeks to a month later was ripe, but not so sound as his. His too was saved in small quantity—mine in large.

Half bush. of ears of G. S.'s corn weighed 25 lbs.
do..do....do....H. C.'s....do.....24¾ lbs.

This was an uncertain mode of measuring—for though we designed to be exact, yet a few ears might easily have been placed on the one, or not have been placed on the other, and yet both measures have appeared equally heaped to the eye.

When the above was shelled and measured, there was not a difference of half a gill—G. S.'s measuring 1 peck, 3 quarts; H. C.'s measuring 1 peck, 3 quarts, and a fraction.

2. His second position is that, "Although there is one-third more kernels on the twelve rowed, yet the cob of the eight rowed is so much smaller and the kernel so much larger, the quantity of *shelled* corn is considerably in favor of the eight rowed."

The cob of G. S.'s corn compared with the size of the ear, judging by the eye, was as small as I ever saw. Now the cobs of the above two parcels of corn were weighed, and the result as follows:

G. S.'s cobs weighed 4¼ lbs.
H. C.'s..do....do...4¾ lbs.

In order, however, to determine more exactly the relative proportion of the cob to the grain in the two kinds, I selected two of the best ears of each sort, shaved the butt as closely as possible, and having carefully shelled the corn, caused the grain and the cob of the two parcels to be separately weighed in an apothecary's scales. Of the two ears of G. S., one measured in length eight inches and one quarter, the other eight inches one half. Those of H. C., one nine and three quarter inches, the other ten inches and one half. Of the two ears of G. S.'s eight rowed,

The grain weighed 8½ oz.—the cob 1½ oz.

Of the two ears of H. C.'s twelve rowed,

The grain weighed 13¾ oz.—the cob 2½ oz.

In these cases it will be found that the proportion of the cob to the grain is precisely the same, and the comparison was made as exactly as possible.

With a view farther to compare the two kinds, I caused one peck of each kind, shelled, well shaken and struck, to be weighed—the result as follows:

* In measuring corn in the ear by the bushel or basket, I do not see why the length of the ear should be considered.

One peck G.S.'s weighed 17 lbs.—68 lbs. per bush.
do...H.C.'s..do....16½..—65....do.....

This difference would doubtless have been less had the two kinds been equally well ripened and saved. The season was particularly unfavorable to late planted corn, and G. S.'s was extraordinarily sound. In proof, likewise, of the very fine and superior character of his corn over that which is generally raised of the eight rowed, perhaps arising from his early planting and particular attention, I immediately weighed one peck of the corn of two other neighbors, of the eight rowed kind, which had been taken in by a shrewd trader at the highest market price. The measure was hard shaken and struck.

One peck weighed 15¼ lbs.—61 lbs. per bushel.
do.....do....14½..do—57.....do.....

With this certainly the twelve rowed would bear not an unfavorable comparison.

Further to illustrate this subject, I beg leave to state the result of an examination in 1827 of several different kinds of corn of the best that I could obtain. The ears were all selected ears, and well cured. The eight rowed, excepting one sample, of a very large kind:

No. I.—12 *rows.*	One ear weighed....7¼
One ear shelled, the oz.	One..do...do.....6½
grain weighed.....9	One..do...do.....6¼
One....do....do....7½	One..do...do.....6
One....do....do....7½	*No. IV.*—8 *rows.* oz.
One....do....do....6¾	One ear weighed....8
No. II.—12 *rows.* oz.	One..do...do.....6¾
One ear weighed....7½	One..do...do.....7¼
One..do...do.....6⅝	One..do...do.....6⅝
One..do...do.....7¼	*No. V.*—8 *rows.* oz.
No. III.—8 *rows.* oz.	One ear weighed....4
One ear weighed....8	One..do...do.....4¼

No. 5 had been recommended as a remarkable corn for its productiveness. It yielded with me about forty bushels to the acre. The above corn was shelled and weighed with great care and exactness.

3. Your correspondent asserts in the third place, that "Of the eight rowed there are generally two ears on each stock (stalk?); while upon the twelve rowed there is rarely more than one; so that on an acre of ground, the number of bushels will be rather in favor of the eight rowed, though the ears are less in size."

After repeated examinations of my fields the last summer in reference to this very point, and in the autumn with a view to selecting seed from double stalks, I cannot say that my eight rowed corn had any advantage over my twelve rowed, the double ears being as numerous on the latter as the former. Success in raising double ears, or obtaining a seed which has this propensity, must depend, there is reason to believe, much more upon the selection of the seed for a succession of years from stalks bearing twin ears, than upon the circumstance of its being of the eight or twelve rowed kind. I believe that the low and small kinds are in general more likely to produce double than the large kinds; but corn weighing only four or four and a half ounces to the ear, must yield double the number of ears on a stalk to equal the crop giving ears weighing eight or nine ounces a piece of grain, though having but one ear to a stalk. When two ears are found on a stalk, they are seldom both perfect; but one of them is commonly smaller than the other, and only partially filled.

It is said that the smaller kinds bear closer planting than the large. This is true—but the

largest kind of eight rowed corn requires as much room as the largest twelve rowed, and the twelve rowed, which I planted at the distance of about three by two and a half feet, has yielded at the rate of 70, 80, 84, and 90 bushels to the acre. The twelve rowed corn raised by Judge Buel, and yielding at 60 lbs. to a bushel at the rate of 108 bushels to the acre, is planted in hills at three by two and a half feet apart. These are certainly good crops, and this must be considered as close planting for any kinds. I doubt if eight rowed corn, in order to yield a similar amount of crop, would bear to be more closely set. I am in favor of rather close planting, though many of our best farmers insist that nothing is gained by it, as the closer the planting, they say, the smaller the ear. There may be an extreme on either side, and a good deal must depend on the kind of corn, and the quality and condition of the soil.

4. Your correspondent assumes in the next place, "That the eight rowed corn comes to maturity a fortnight sooner than the twelve rowed."

I presume from this remark that he is very fortunate in his variety. The very small Canadian corn soon arrives at maturity; but it is with us worth very little for field cultivation. I procured the last and the previous year, some eight rowed corn from a friend in Vermont, represented as very early and productive; but though planted at the same time, it was not earlier ripe than my twelve rowed on land of the same quality and aspect. The richer the soil is made by manure, the later in all cases is the ripening of the corn, as the forage becomes more luxuriant and succulent. The corn of G. S. was very early ripe—but it was early planted. Still I believe it to be more than a fortnight earlier than the large eight rowed corn planted in this vicinity. But it certainly had no advantage of mine excepting in the planting. Judge Buel says of his corn, (which is twelve rowed) "it is earlier than the common eight rowed yellow, or any other field variety, which I have seen, and at the same time gives the greatest product. I have invariably cut the crop in the first fourteen days of September, and once in the last week of August." He adds, what is particularly applicable in this discussion, "The cob is large, but the grain is so compact upon it, that two bushels of sound ears have yielded five pecks of shelled grain, weighing 62 lbs. the bushel."* An intelligent farmer in Northampton, Mass., says his corn, the golden Sioux, twelve rowed, is three weeks earlier than that of his neighbor's generally, who plant, I believe, a large eight rowed variety. The corn obtained from Vermont by E. Phinney, Esq. of Lexington, Mass., was planted in the backward season of 1832, on the 21st of June, by Mr. Chandler, of Lexington, Mass., (as Mr. C. assured me,) and marketed ripe in Boston to go to New Orleans the first week in September. I met with a very early ripe field corn in Conway, N. H., near the White Mountains, which though planted very late, was gathered and put in crib before the middle of September. The particular dates I do not remember. This was twelve rowed. There is a great difference in the time of ripening of different kinds of corn, but this I believe does not mainly depend on the number of its rows. Great advantage is gained by selecting the earliest ripe for seed. The Rev. Dr. Freeman, of Boston, one of the most exact and intelligent observers, in an experiment on case knife beans continued five successive years, by selecting the most perfect and earliest ripe, actually forwarded the ripening of the same variety in the same garden twenty-six days*. This was a most valuable experiment; and the method may be applied to other seeds beyond a doubt with a similar effect.

I submit these statements, Mr. Editor, not with any ambition of controverting the opinions of your correspondent, but as materially connected with the subject of his remarks. How far they are decisive as to the comparative merits of the two kinds of corn under discussion, I submit to the judgment of others. I go for that corn which gives the largest number of the largest ears on the same land. If the eight rowed will do this, I am for that. If the twelve rowed, for that. The subject is yet open to the true test, actual experiment. Nothing is more prejudicial to the cause of agriculture than unfounded hypotheses, however ingenious; or positive assertions, made upon insufficient or slight examination. Hardly any thing is less to be relied on than "hearsay" testimony. Your correspondent is pleased to compliment the Yankees. The Yankees may learn much from your intelligent cultivators. Being a true Yankee, I am anxious to obtain that seed of corn which will give me the best crops at the least expense. But having suffered much from my credulity, I can hardly be persuaded to believe any thing in these matters upon mere assertion, nor without the fullest and most exact experiment, and upon evidence which is incontrovertible.

Respectfully yours, H. C.

Meadowbanks, Deerfield, Mass., Jan. 31, 1834.

* Proceedings of N. Y. State Agricultural Society, 1833, p. 57. [Gen. Far. vol. 3, p. 93.]

* Paper of Mass. Ag. Soc. for 1806, p. 68.

For the Genesee Farmer.

Rotation of Crops.

We find a great deal said in English publications, of the importance of a rotation of crops; and although we may receive, and doubtless do receive, many valuable hints from our transatlantic brethren, yet their soil, their climate, their markets, and price of labor, are so different, as to render it highly improper for the American farmer implicitly to follow their directions. Indeed, it would be imprudent to follow the directions of the best farmers of New England, for the good reasons, that our most valuable products, as well as our soils, are different. In Western New-York the soil is well adapted to wheat. It is the great staple. To that the farmer looks to supply him with money. That mode of farming, therefore, which produces this crop in the greatest perfection, is the one he ought to pursue. It is well known that land may be too rich for wheat, and that the application of barnyard manure immediately preceding a crop of wheat, is considered by the best farmers injudicious. I am in favor of an alternation of crops, and have found the following to answer best on my farm, which is considered a good wheat soil.

Indian corn is a gross feeder; indeed, it is impossible to make land too rich for it; I therefore give my corn and potatoe ground all the manure I can collect, and if the corn be planted early, and well tended, it may be cut and drawn off in season for wheat, and the ground put in a good state to receive it by one ploughing. If however the farmer have sufficient ground for wheat without it, the better method is to put on barley or peas next season, and as soon as the crop is taken off, give the ground a thorough harrowing, which will cause the seeds that may have dropped to vegetate, in which state it should be left till near the time of seeding, when one good ploughing will be better than more. Then run a light harrow over it, which puts the ground in a better state to receive the wheat. Then harrow twice and follow with the roller, when every good farmer will strike water furrows. By this mode of management, all the vegetable matter which may have sprung up will be completely *buried in the soil*, and there remain to enrich it.

Few farmers occupy as many acres with corn, potatoes and ruta baga, as they wish to sow with wheat. If the system of clovering is pursued, (which I recommend to every farmer) I deem naked fallows unnecessary. A good sward turned in, after plastering—if a heavy soil, in the fall, if light, in the spring—rolled, and then harrowed, will put the ground in a fine state for peas, barley or oats. Immediately after the crops are taken off, proceed as above directed, and if the land be in good heart, we may safely calculate on a good crop of wheat. If the land be rich, I have frequently taken a second crop of wheat before seeding with grass, equally heavy with the first.

This mode cannot be profitably pursued unless the land is rich; and if not so, green crops ploughed in will make it so. I have this year turned in a heavy crop of buckwheat in blossom, in a field exhausted by the previous occupant. I then sowed wheat, and shall give it at least ten pounds of clover seed per acre early in the spring, and then plaster.

Some of the best farmers of Pennsylvania assert, that calcareous land may be made to produce heavy crops of wheat for several successive years, by means of clover and plaster sown every year; and where the farmer raises his own clover seed, he may sow it in the chaff, and find the method profitable, not only as it relates to crops, but what is equally important, his land is continually growing richer. I have not given this method a trial, but intend to do it. If found to succeed, it will go to establish a fact not yet settled, that clover restores to the land the principles yielding starch and gluten, without which wheat cannot perfect itself. This fact once established, the farmers of our western country will raise of other crops no more than may be necessary for their own consumption.

I saw the last of five successive crops of wheat growing in the calcareous soil on the east bank of Cayuga Lake, which was estimated to yield 25 bushels per acre. If then this soil, managed as in Pennsylvania, actually furnishes the pabulum of wheat, may we not draw the conclusion, that such soils only as are primitive, or are destitute of lime, require a regular rotation of crops?

ONTARIO.

For the Genesee Farmer.

In the *last* column of the *last* number of the *last* volume of the Farmer, I observe a selected article headed "*Conducting power of Trees*," in which it is stated that the *maple* is never struck by lightning. This is a great mistake. I have known several instances, within a few years past, of *sugar maples* having been struck by lightning,

but have never known it strike a *beech* or *birch*. The pine and hemlock suffer most from electric strokes; next the *white* oak, chestnut, white ash, basswood, &c. W. H.

For the Genesee Farmer.

Cattle--No. I.

In a recent number of the Farmer,* your valuable correspondent, Ulmus, has again introduced the subject of CATTLE, with a concise account of the various *improved breeds*, which at present are held in high estimation among our most intelligent agriculturists. I regret that he has not entered more largely into the subject, and spread out before your readers the extensive knowledge which he has doubtless acquired in relation to the natural history, improvement and extension of the various breeds of Cattle, both in our own country and Great Britain. No branch of agricultural care and labor is of more importance, and none of greater interest, not only to the farmer, but to the community at large. While all classes participate in the luxuries of the *dairy* and the *market*, they must necessarily feel the slightest improvement or deterioration in the sources of these pleasures; and whatever therefore tends to disseminate knowledge among the people on subjects so important to their comfort and happiness, must excite a corresponding interest in the minds of all.

Among all your correspondents who have written on the subject of cattle, none seem to have thought it necessary to do more than *allude* to the existence of certain breeds, their qualities, their excellencies, their patrons, and their improvers, without going into their origin, history or extension, or the inducements which have led from time to time to their improvement. I must confess that I have formerly been subjected to great embarrassment, while conversing upon the subject of improved cattle, and while viewing some of the most beautiful specimens of these breeds, in not being able to retrace at once the history and improvement of cattle in our own country as well as England. The frequent inquiry, too, on the part of others, in relation to the origin of the several *improved* breeds, have been the source of some perplexity. The names of Devon, Hereford, Dishley, Durham, Holderness, and Alderney, are familiar to us all; but I venture to say, from my own experience and observation, that but few of the farmers in our country, and perhaps but a small portion of your readers, are acquainted with the *origin* of these breeds, their *peculiarities*, their *distinctive qualities*, the *causes* which led to their improvement, or the *persons* to whom the world is indebted for the development of the natural and acquired properties of these valuable animals.

Without arrogating to myself any superior knowledge or merit, and in the absence of some more able correspendent, I propose in some measure to supply this defect, and to furnish the readers of the Farmer with the result of my own researches and reading on the subject, without pretending to *direct* or *advise* them in their selections. And I might here probably with much more truth and reason than Ulmus has done, plead the excuse of "*incompetency*" and want of ability.

I fully accord with the sentiment expressed by John Hare Powell, Esq. of Philadelphia, in a letter to Mr. Featherstonhaugh on this subject, that we are to receive with great caution the opinions of "flippant writers and half bred philosophers, who would teach without knowledge as they farm without land," while due deference should be had "to those patriotic, enlightened and liberal men, who by *practice* detect error; by *science* expound theory; and by their generous exertions and zeal, elevate the importance and extend the influence of this most essential of all human arts." It is to men of this latter description we are to look for experimental knowledge on this as well as on other subjects, and in the remarks which I shall hereafter make, and in the views which I shall present, I shall rely more upon their experience and judgment than upon my own.

There is certainly a great diversity of opinion among our most intelligent and experienced agriculturists, on the subject of *improved cattle*, and it is far from being settled, that the introduction of any of the improved breeds into our country, will essentially change the acclimated character of our own cattle, or ultimately impart any benefit which does not arise from the selection and *improvement* of our present stock. The examples which Ulmus has given us of the diversity of sentiment on this subject, among some of our most distinguished stock breeders, will supersede the necessity of my illustrating these facts. All must agree, however, that great and paramount advantages are obtained by a careful attention to the form, habits and peculiarities of cattle, whether belonging to one breed or another; and that it is owing to the cultivation of these discriminating qualities, that we are enabled to arrive at any unusual excellence. But whatever preferences may exist in the minds of our agriculturists, or however reluctant they may be to admit innovations, it is certainly the part of wisdom to examine the claims of others, and to profit by their experience, whenever decided advantages are to be obtained. That we have the elements in our own herds of great improvements, and perhaps of surpassing excellence, no one can doubt; but whether it is better to reject the one hundred year's *experience* and *improvement* of our transatlantic brethren, for the privilege of wading through the same path of toil and perplexity, to arrive at the same result, is a matter worthy of consideration. To what expense, and toil, and care, and study, and perplexity, the breeding of cattle has subjected them, in endeavoring to improve the qualities of their stock, we shall see in the sequel; but whether after all, this labor and expense has resulted in any adequate remuneration, we shall then be able to determine.

The cattle of the United States are principally derived originally from England, though the Dutch and German settlers of the middle states introduced many of their own breeds at the time of their emigration. It is evident, however, that our cattle cannot differ essentially from those of England; and that we possess among us, to a greater or less extent, all their different native breeds. Whatever modes of treatment, whatever care in breeding, and whatever success in improvement may have occurred there, we may then safely apply to this country, making due allowances for difference of climate and circumstances.

If we have in this country the original Devons, or Dishleys, or Holderness, or any other breed, or a compound of any or all of them, as we doubtless have, a careful attention to the history and management of the same breeds in England, will enable us at least to avoid their errors, and to adopt their experience and their improvements, in the perfection of our own. But if after a thorough investigation, we shall be satisfied that to improve upon the same originals, we must pass through the same channels of information, adopt the same or a similar mode of management, and that we shall in all probability arrive at the same conclusions, we shall then, too, be better prepared to adopt, at once, their improvements as the maximum of skill and science.

To do even partial justice to this subject, I shall have occasion to extend my remarks through several numbers of the Farmer, and in so doing shall make frequent extracts from foreign works, and especially from the "Farmer's Series of Useful Knowledge." I shall be glad, also, if circumstances will permit, to accompany these descriptions with plates of the different varieties of animals.

In my next number, therefore, I propose to *enter* upon a short description of the different breeds of cattle, as they originally existed in Great Britain, with reference to their general classification, leaving the history and improvement of particular breeds for future consideration. QUERCUS.

* Vol. 3, p. 404.

For the Genesee Farmer.

Highways---No. XVII.

Whether side-tracks for sleighs, would be of much moment in the *eastern* part of our state, or not, I am not sufficiently acquainted with the climate and localities to determine. Probably in the *northern* parts where the snow lies well, they would not be needed. It would often be difficult to construct them among the hills; and the officers who may hereafter be appointed to have the supervision of our highways, might have discretionary powers in this matter. Their importance in much of the *western* parts of the state however, must be manifest to every person of good sense who will attend to what passes every winter; and I hope that so great a convenience will not be forgotten by our Legislature when the Road Laws shall undergo a thorough revision.

Before any essential improvement can be made in the management of our roads, it will be necessary to *elevate the character* of those who direct the expenditures. I know that a part of the community have esteemed those commissioners most worthy of popular favor who brought in *the lowest bills* for their services without reference to what they had done or had left undone. The most of men are disposed to float with the current. If commissioners of highways feel the benumbing influence of a parsimonious spirit in the public, we cannot reasonably hope that overseers who are *chosen by rotation* will do much to advance the improvements of the age. For this business we must select men of *more than usual* energy and judgment, for the same reason that we would employ the best lawyer, the best physician, or the best mechanic. If they ask more, they deserve more, and in the long run *their services come cheaper*. The amount of taxes that are often *wasted* through a want of knowledge to apply them properly, would be more than sufficient to *repair the roads*, and to *pay the wages* of talented men.

VIATOR.

For the Genesee Farmer.

American Grapes.

As a very considerable variety of American Grapes have of late been collected and brought into notice, possessing different degrees of merit, it is very desirable for the satisfaction of those who may wish to select for their own cultivation, that their respective merits should be made known. Of a number of the best kinds, this has already been done; and some of them have already come into such general cultivation, that they are well known; as the Isabella, Catawba, Bland, &c. The writer's knowledge of American Grapes extends to but a few varieties. There is one, however, to whose excellencies he can bear testimony, but little known in this part of the state, but which has received a very favorable notice from the younger Mr. Prince in a communication in the 4th number of the second volume of the Genesee Farmer. Until I saw that communication, I supposed the grape a foreign one, for I obtained it as such at a vineyard between Troy and Lansingburgh, composed entirely of this grape. It there went by the name of the Black Hamburg; and from the excellency of the fruit, its entire freedom from any foxy flavor, I supposed it was a foreign grape. The characteristic appearance however of the leaf and wood, which marks all our native varieties, shows it to be an American grape. Mr. Prince says, it "appears to him to approach the Isabella more nearly than any other variety that has met his notice." It however differs from it in several respects. The fruit is oval like the Isabella, rather larger I should think, a dark purple or black, with little or no pulp when thoroughly ripe, juice rich and sweet, with none of the peculiar musky flavor of the Isabella, which to some is unpleasant, ripens about the same time with the Isabella, is an abundant bearer, and on the whole a *very valuable grape.* What are its qualities for wine I know not, though I should think fully equal if not superior to the Alexander. Mr. Prince calls it the *Troy Grape*, and advertises it under this name in his catalogue. We should be glad to know something of its origin, how or by whom introduced into cultivation about Troy.

An amateur of the grape, a Mr. Gay of the Seneca Falls, informed me this fall, that he had a grape growing in his garden which he valued very highly, a *native of Western New-York*, which, from the location where he found it growing in its original wildness, he has named the "Island Grape." If I recollect distinctly, he said he found it growing on an island at or near the junction of the Clyde with the Seneca river. He described it as a white grape, similar to the Sweet Water in size and appearance, of a fine flavor. From his description, I inferred it was not the common white fox grape. I am not aware that the white fox grape grows wild in the western part of our state. Mr. Gay would confer a favor upon the public, by giving in the Genesee Farmer a particular history and description of this grape; whether he considers it the same as the New England white fox grape; its comparative merits with other well known grapes; time of ripening, &c. Especially as it is the product of our own part of the state, this description would be the more interesting W. W. B.

P. S. In a recent communication I have received from Mr. Prince, in answer to one in which inquiries were made relative to the Susquehanna Grape he says: "The whole tale about the Susquehanna Grape is an *infamous humbug*. There is nothing *palliative* or *explanatory* that is based on *real facts*. We know so well the *characters* of foreign and native vines, that we would put *life almost* on the decision."

W. W. B.

Hammond's Port, Dec. 24.

Meteorological Table.

KEPT AT ROCHESTER, FOR JANUARY, 1834.

	10 A. M.				10 P. M.			
Days.	therm.	barom-eter.	winds	sky	therm.	barom-eter.	winds	sky
1	28	29,75	w	cloudy	26	29 75	N W	fair
2	[illegible]	29,05	S W	r 2-10 in	28	29,25	N W	cloudy
3	15	29,7	w	fair snow	14	29,85	N W	fair
4	12	30,00	w	do*	12	30,00	N W	do
5	[illegible]	29,9	w	do	13	29,80	w	do
6	20	29,65	w	do	14	29 50	w	do
7	18	29,50	S W	cloudy	24	29,25	w	cloudy
8	2[illegible]	29 50	w	fair snow	22	29,65	S W	fair
9	[illegible]	29,65	S W	do	34	29,70	S W	do
10	33	29,80	S E	cloudy	35	29,50	S E	cloudy
11	40	29,40	S E	do	38	29,40	S E	do
12	40	28,90	S W	do	30	29,15	w	do‡
13	30	29,60	w	fair h. w.	21	29,75	w	fair
14	8	29,[illegible]	w	do	25	29,95	w	do
15	[illegible]	30,20	w	do†	18	30,05	N	do
16	36	30,00	S W	do	30	29,75	S	do
17	50	29,40	S W	cl'y rain	45	29,45	S	cloudy
18	42	29,50	w	do do	38	29,60	w	do
19	40	29,60	w	do	38	29,35	w	fair
20	30	29,50	N W	fair	18	29,60	N W	cloudy
21	19	29,60	N W	clo snow	18	29,85	w	fair
22	20	29,85	w	do do	18	29,85	w	cloudy
23	16	29,80	N	fair*	14	29,75	E	fair
24	18	29,95	N E	clo sn 3 in	13	30,00	N W	do
25	1[illegible]	29,80	S E	fair	23	29,35	S	cloudy
26	26	29,10	w	cloudy sn	18	29,35	w	do
27	18	9,45	N W	do fine sl	22	29.45	w	do
28	20	29,50	w	fair	2[illegible]	29,70	w	fair
29	2[illegible]	30,10	E	do	22	29,95	E	do
30	30	29,80	S	do	35	29,70	S W	do
31	30	29,70	w	cloudy	34	29,70	S W	cloudy

Means.—Thermometer 26—Barometer 29.67 — Snow 13 inches—Rain 3-10 inches.

* Thermometer 10° above zero, Sunrise.

† Spring water 39°.

‡ Viole t tornado, Barometer had fallen at 2 P. M to 28,65.

PRICES CURRENT.

ARTICLES.	PER	*Feb.* 14. ROCHESTER.	*Feb.* 10. NEW-YORK.
Ashes—Pot....	100lbs.	$3,25 a 0,00	$4,25 a 4,28
—— Pearl..	.....	3,50 a 4,25	4,60 a 4,65
Beeswax, yellow	lb.	0,16 a 0,18	21 a 22
Candles, mould	.....	0,10 a 0,11	13. a 14
—— dipped.	.....	0,10a0,10½	11 a 12
Cloverseed....	.....	.....	7½.a.8½
Flax, American.	.....	.....	8..a..9
Flax seed, clean	tierce	9,00a10,00	14,75 a14,88
Flour, Western.	barrel	4,50 a 5,00	5,25 a5,50
Grain, Wheat..	bushel	0,89 a 0,00	.....
—— Rye....	.....	0,62.....	72..a..73
—— Oats...	.....	0,27.....	42..a..44
—— Corn...	.....	0,46.....	60..a..65
—— Barley..	.....	0,50..a..56	70..a..71
Hemp, Americ'n	ton	.....	100 a 125
Hops, 1st sort..	lb.	.....	18..a..19
Plaster Paris...	ton	6,00 a 0,00	2,88 a3,00
Beef, Mess....	barrel	0,00 a10,00	9,50 a....
—— Prime....	.....	0,00 a 8,00	5,56 a 5,75
Pork, Mess....	.....	13,00a14,00	14,00a14,50
—— Prime....	.....	11,00	10,25a10,75
—— in the hog.	100lbs.	4,50 a 5,00	.....
Hog's Lard....	.....	8,00 a 9,00	8,00 a 8,50
Tallow.....	.....	7,50 a 8,00	8,75.....
Hay.....	ton	7,00 a 8,00	11,20 a....
Apples.....	bushel	25..a..50	.....
Potatoes.....	.....	18..a..25	.....
Cheese.....	lb.	6..a...8	7½a....
Butter.....	.....	12..a.14	15..a..17

Albany Seed Store and Horticul-

TURAL REPOSITORY.

THE subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and growth of 1833, *warranted* of the best quality

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures hereafter, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered, and perfection approximated.

Orders will be punctually attended to, and carefully packed and forwarded as directed. But as the collection of distant debts is often troublesome, and sometimes impracticable, it is desired that satisfactory references may be made to persons in *Albany*, when the order is not accompanied with the money.

Also, French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurzel, Yellow Locust, Ruta Baga, and Field Turnep Seeds, well worth the attention of *Farmers*.

W. THORBURN,

347 N. Market-st. (opposite Post Office.)

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis: *orders* solicited early, as better justice can be done in the execution.

Albany, Jan. 21, 1834. feb1-f4tr1ta1t

Valuable Sheep for Sale.

THE subscriber having more SHEEP than he wishes to keep through the summer, will on or before the first of June next, sell about eighty of his fine wooled Ewes with their lambs. Farmers wishing to commence or increase their flock of sheep, will seldom meet with as profitable a lot of Ewes. The greater part of them have been raised from rams from the flock of the Hon. R. S. Rose, and the lambs to be sold with them are from rams selected from the above mentioned flock, which for quality of wool, is not excelled in the United Sates. The subscriber has also 135 three and four year old Wethers of the first quality, which he will sell about the same time. JOHN JOHNSON.

Fayette, Seneca County, Feb. 7, 1833. feb8-f3m

Durham Cattle for Sale.

A FEW choice animals of the pure "Improved Durham Short Horn" breed, consisting of *Bulls*, *Cows*, *Heifers* and *Calves*, may be obtained of the subscriber, if applied for soon.

CALEB N. BEMENT.

Albany, Feb. 1, 1834. feb 1-f4t

For Sale,

A LEVELING INSTRUMENT or pi level, with a tripod—price 75 dollars. Ap to DAVID THOMAS,

Jan. 10, 1834. near Aurora in Cayuga county.

MONROE GARDEN AND NURSERY,

GREECE, NEAR ROCHESTER, N. Y.

THE subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots Nectarines, Quinces, Currants, Gooseberries Raspberries, Strawberries, Ornamental Trees Shrubs, Plants, Hardy Roses. Vines, Creepers, Herbaceous, Perennial Plants, Bulbous Roots, &c.

Also, a few hundred of the Morus Multicaulis or Phillipine Mulberry, the white Italian Mulberry by the hundred or thousand, English Hawthorn Quicks, Grape Vines of both native and foreign varieties, mostly of large size, for sale by the single vine, hundred or thousand at reduced prices The subscriber has a large Green House well filled with a large collection of choice Green-House Plants in good condition.

All orders, by mail or otherwise, will be promptly attended to, and packages delivered in Rochester or at the mouth of Genesee River.

ASA ROWE.

Orders for Mr. Rowe's Nursery received by the Publishers of this paper

Catalogues may be had at the office of the Genesee Farmer—will be sent to those who wish them gratis. October 5, 1833. f6m

Science of Agriculture.

Selected for the Genesee Farmer.

IMPROVING THE BREEDS OF ANIMALS.

By improving of a breed, is to be understood the producing such an alteration in shape or description, as shall render the animal better fitted for the labors he has to perform; better fitted for becoming fat; or for producing milk, wool, eggs, feathers, or particular qualities of these. The fundamental principle of this amelioration is the proper selection of parents. Two theories have obtained notice on this subject, the one in favor of breeding from individuals of the same parentage, called the *in-and-in* system, and the other in favor of breeding from individuals of two different offsprings, called the system of *cross-breeding*.

That the breed of animals is improved by the largest males, is a very general opinion, but this opinion is the reverse of the truth, and has done considerable mischief. The great object of breeding, by whatever mode, is the improvement of form, and experience has proved, that crossing has only improved, in an eminent degree, in those instances in which the females were larger than in the usual proportion of females to males, and that it has generally failed where the males were disproportionably large. (*Cully's introduction, &c.*) The following epitome of the science of breeding, is by the late eminent surgeon, HENRY CLINE, who practiced it extensively on his own farm at Southgate.

The *lungs* are of the first importance. It is on their size and soundness that the strength and health of animals principally depends. The power of converting food into nourishment is in proportion to their size. An animal of large lungs is capable of converting a given quantity of food into more nourishment than one with smaller lungs; and therefore has a greater aptitude to fatten.

The *chest*, according to its external form and size, indicates the size of the lungs. The form of the chest should approach to the figure of a cone, having its apex situated between the shoulders, and its base towards the loins. Its capacity depends on its form more than on the extent of its circumference; for where the chest is equal in two animals, one may have much larger lungs than the other. A circle contains more than an elipsis of equal circumference; and in proportion as the elipsis deviates from the circle, it contains less. A deep chest, therefore, is not capacious, unless it is proportionally round.

The *pelvis* is the cavity formed by the junction of the haunch bones with the bone of the rump. It is essential that the cavity should be large in the female, that she may be enabled to bring forth her young with less difficulty. Where the cavity is small the life of the mother and her offspring is endangered. The size of the pelvis is chiefly indicated by the width of the hips, and the breadth of the waist, which is the space between the thighs. The breadth of the loins is always in proportion to that of the chest and pelvis.

The *head* should be small, by which the birth is facilitated. Its smallness affords other advantages, and generally indicates that the animal is of a good breed. Horns are useless to domestic animals, and they are often a cause of accidents. It is not difficult to breed animals without horns. The breeders of horned cattle and horned sheep, sustain a loss more sensible than they conceive; for it is not the horns alone, but also much bone in the skulls of such animals to support the horns, for which the butcher pays nothing; and besides this there is an additional quantity of ligament and muscle in the neck, which is of small value. The skull of a ram with horns, weighed five times more than a skull which was hornless. Both these skulls were taken from sheep of the same age, each being four years old. The great difference in weight depended chiefly on the horns, for the lower jaws were nearly equal; one weighing seven ounces, and the other six ounces and three quarters, which proves that the natural size of the head was the same in both, independent of the horns and the thickness of the bones which supports them. In horned animals the skull is extremely thick. In a hornless animal it is much thinner, especially in that part where the horns usually grow. To those who have reflected on the subject it may appear of little consequence whether sheep and cattle have horns, but on a moderate calculation it will be found, that the loss in farming stock, and also in the diminution of animal food, is very considerable, from the production of horns and their appendages. A mode of breeding which should prevent the production of these, would afford a considerable profit in an increase of meat, wool, and other valuable parts.

The length of the neck should be proportioned to the highth of the animal, that it may collect its food with ease.

The muscles, and the tendons, which are their appendages, should be large; by which an animal is enabled to travel with greater facility.

The bones, when large, are commonly considered an indication of strength; but strength does not depend on the size of the bones, but on that of the muscles. Many animals with large bones are weak, their muscles being small. Animals that have been imperfectly nourished during their growth, have their bones disproportionately large. If such deficiency of nourishment originated from a constitutional defect, which is the most frequent cause, they remain weak during life. Large bones, therefore, generally indicate an imperfection in the organs of nutrition.

To obtain the most approved form, the two modes of breeding described as the in-and-in and crossing modes, have been practiced. The first mode may be the better practice, when a particular variety approaches perfection in form; especially with those who may not be acquainted with the principles on which improvement depends. When the male is much larger than the female, the offspring is generally of an imperfect form. If the female be proportionably larger than the male, the offspring is of an improved form. For instance, if a well formed large ram be put to ewes proportionately smaller, the lambs will not be so well shaped as their parents; but if a small ram be put to large ewes, the lambs will be of an improved form. The proper method of improving the form of animals consists in selecting a well formed female proportionately larger than the male. The improvement depends on this principle, that the power of the female to supply the offspring with nourishment, is in proportion to her size, and to the power of nourishing herself from the excellence of her constitution. The size of the fœtus is generally in proportion to that of the male parent; and therefore, when the female parent is proportionably small, the quantity of nourishment is deficient, and her offspring has all the disproportions of a starveling. But when the female, from her size and good constitution, is more than adequate to the nourishment of a fœtus of a smaller male than herself, the growth must be proportionately greater. The larger female has also a larger quantity of milk, and her offspring is more abundantly supplied with nourishment after birth.

Abundant nourishment is necessary to produce the most perfect formed animal, from the earliest period of its existence until its growth is complete. As already observed, the power to prepare the greatest quantity of nourishment from a given quantity of food, depends principally on the magnitude of the lungs, to which the organs of digestion are subservient. To obtain animals with large lungs, crossing is the most expeditious method; because well formed females may be selected from a large size, to be put to a well formed male of a variety; that is, rather smaller. By such a mode of crossing, the lungs and heart become proportionately larger, in consequence of a peculiarity in the circulation of the fœtus, which causes a larger proportion of the blood, under such circumstances, to be distributed to the lungs, than to the other parts of the body; and as the shape and size of the chest depend upon that of the lungs, hence arises that remarkably large chest, which is produced by crossing with females that are larger than males. The practice, according to this principle of improvement, however, ought to be limited, for it may be carried to such an extent, that the bulk of the body might be so disproportioned to the size of the limbs as to prevent the animal from moving with sufficient facility. In animals, where activity is required, this practice should not be extended so far as in those which are intended for the food of man.

The characters of animals, or the external appearances by which the varieties of the same species are distinguished, are observed in the offspring; but those of the male parent more frequently predominate. Thus in the breeding of horned animals there are many varieties of sheep, and some of cattle, which are hornless. If a hornless ram be put to horned ewes, almost all the lambs will be hornless; partaking of the character of the male more than of the female parent. An offspring without horns, or rarely producing horns, might be obtained from the Devonshire cattle, by crossing with bulls of the Galloway breed; which would often improve the form of the chest, in which the Devonshire cattle are often deficient.

Examples of the good effects of crossing may be found in the improved breeds of horses and swine in England. The great improvement in the breed of horses arose from the crossing with the diminutive stallions, Barbs and Arabians; and the introduction of Flanders mares into the country was the source of improvement in the breed of cart horses. The form of the swine has been greatly improved, by crossing with the small Chinese boar.

Examples of the bad effects of crossing a breed are more numerous. When it became the fashion in London to drive large bay horses, the farmers in Yorkshire put their stallions to much larger mares than usual, and thus did infinite mischief to their breed, by producing a race of small-chested, long-legged, large-boned, worthless animals. A similar project was adopted in Normandy, to enlarge the breed of horses there, by the use of stallions from Holstein; and in consequence the best breed of horses in France would have been spoiled, had not the farmers discovered their mistake in time, by observing the offspring much inferior in form to that of their native stallions. Some graziers in the isle of Sheppey conceived that they could improve their sheep by large Lincolnshire rams; the produce of which, however, was much inferior in the shape of the carcase and the quantity of the wool; and the flocks were greatly impaired by this attempt to improve them. Attempts to improve the animals of a country by any plan of crossing, should be made with the greatest caution; for by a mistaken practice, extensively pursued, irreparable mischiefs may be done. In any country where a particular race of animals has continued for centuries, it may be presumed that their constitution is adapted to the food and climate.

It may be proper to improve the form of a native race, but at the same time it may be very injudicious to attempt to enlarge their size; for the size of animals is commonly adapted to the soil and climate which they inhabit. Where produce is nutritive and abundant, the animals are large, having grown proportionally to the quantity of food which, for generations, they have been accustomed to obtain. Where the produce is scanty, the animals are small, being proportioned to the quantity of food which they were able to procure. Of these contrasts, the sheep of Lincolnshire and of Wales are samples. The sheep of Lincolnshire would starve on the mountains of Wales.

Crossing the breeds of animals may be attended with bad effects in various ways; and that even when adopted in the beginning on a good principle; for instance, suppose some larger ewes than those of the native breed, were taken to the mountains of Wales, and put to the rams of that country; if these foreign ewes were fed in proportion to their size, their lambs would be of an improved form, and larger in size than the native animals; but the males produced by this cross, though of a good form, would be disproportionate in size to the native ewes; and, therefore, if permitted to mix with them, would be productive of a starveling, ill-formed progeny. Thus a cross, which at first was an improvement, would, by giving occasion to a contrary cross ultimately prejudice the breed. The general mistake in crossing has arisen from an attempt to increase the size of a native race of animals; being a fruitless effort to encounter the laws of nature.

From theory, from practice, and from extensive observation, the last more to be depended on than either, "it is reasonable," Cline continues, "to form this *conclusion:* it is wrong to enlarge a native breed of animals, for in proportion to their increase of size, they become worse in form, less hardy, and more liable to disease."—*Communications to the B. of Ag. Vol. IV. p. 446.*